DOCUMENT RESUME

ED 269 792 CS 209 770

AUTHOR Wesson, David A.
TITLE Copyfitting Instructor: A Computer-Assisted Instructional Aid for the Dirtiest Job in Advertising Design and Production Courses.
PUB DATE Aug 86
NOTE 15p.; Paper presented at the Annual Meeting of the Association for Education in Journalism and Mass Communication (69th, Norman, OK, August 3-6, 1986).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Advertising; *Computer Assisted Instruction; *Computer Software; Higher Education; *Layout (Publications); Printing; Teaching Methods
IDENTIFIERS *Copyfitting

ABSTRACT

Copyfitting is probably the least exciting portion of any course that deals with design and production of print advertising. Students find the transformation of manuscript copy into set type difficult to visualize. The math, though no more than multiplication and division, seems insurmountable to some--probably because the entities such as points, picas, units, and such are not familiar and what is happening to them not directly obvious. Even professionals forced to grapple with these manipulations find them less appealing than designing with markers and type. "Copyfitting Instructor" is a computer program written to alleviate some of the tedium. Its origins are in a program developed for professionals and designed to take over the calculator work. This instructional package also contains the original "Copyfitting Expert" as one of its modules so it can be retained for use after the instructional portions have fulfilled their function. That is, if a student never figures out how to do the math but succeeds in just learning the concepts, this program, which may be freely copied and retained, will solve whatever future copyfitting situation should arise. The program is written in four modular, self-sufficient packets, compiled from "Basic" with source code included for modification, improvement, or customization. The program has three levels of sophistication, permitting some flexibility in how the program is integrated into the usual drill on copyfitting. (Author/HTH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED269792

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

David A. Wesson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

COPYFITTING INSTRUCTOR: A COMPUTER-ASSISTED INSTRUCTIONAL AID FOR THE DIRTIEST JOB IN ADVERTISING DESIGN AND PRODUCTION COURSES

David A. Wesson, PhD.
College of Journalism
Marquette University
Milwaukee, WI 53233

August, 1986

Presented to the AEJMC Advertising Division
Teaching Standards Session.
Accompanied by a demonstration of the program.

CS209770

ABSTRACT

COPYFITTING INSTRUCTOR: A COMPUTER-ASSISTED INSTRUCTIONAL AID FOR THE DIRTIEST JOB IN ADVERTISING DESIGN AND PRODUCTION COURSES
Accompanied by a demonstration of the program.

Copyfitting is probably the least exciting portion of any course that deals with design and production of print advertising. Students find the transformation of manuscript copy into set type difficult to visualize. The math, though no more than multiplication and division, seems insurmountable to some--probably because the entities such as points, picas, units and such are not familiar and what is happening to them not directly intuitive. Even professionals forced to grapple with these manipulations find them odious--certainly less appealing than designing with markers and type.

COPYFITTING INSTRUCTOR was written to attempt to alleviate some of the tedium. Its origins are in a program designed for professionals which was designed to simply take over the calculator work. This CAI package also contains the original COPYFITTING EXPERT as one of its modules so it can be retained for use after the instructional portions have fulfilled their function. That is, if a student never figures out how to do the math, but succeeds in just learning the concepts, this program, which may be freely copied and retained, will solve whatever future copyfitting situation should arise.

The program is written in four modular, self-sufficient packets, compiled from BASIC with source code included for modification, improvement, or customization. There are three levels of sophistication, permitting some flexibility in how the program is integrated into the usual drill on copyfitting.

COPYFITTING INSTRUCTOR: A COMPUTER-ASSISTED INSTRUCTIONAL AID FOR THE DIRTIEST JOB IN ADVERTISING DESIGN AND PRODUCTION COURSES
Accompanied by a demonstration of the program.

Teaching copyfitting is generally an unrewarding experience, I've found. After a week of introduction to the concepts and procedures in an Advertising Design and Production course, approximately one half of the class seems to grasp the matter directly. They can do the exercises and get fairly reasonable answers. The other half immediately becomes baffled. They can do the exercises, but their answers are usually off by huge orders of magnitude. For example, manuscripts are calculated as being 1.4 characters long, etc.

After a second week of instruction, the baffled half appears to still be baffled, but miraculously, the extra week of instruction has resulted in baffling the students who originally had a grasp on the whole business.

Hopefully, you've had better luck. But the point is that students pick up abstract, mathematical concepts at different rates. What we need is a way to customize the amount of drill to fit students' learning rate. We also need to reduce the amount of calculator work that goes into copyfitting tasks so that the <u>ideas</u> have a chance to shine through the mathematical gloom that oppresses so many students.

Even professionals dislike the repetitive calculator punching that goes into this important, necessary, yet unaesthetically rewarding task. Because there are so many numbers to keep track of through several steps, one art director noted that anyone hitting it right 80% of the time is a champ. To aid professionals, there is a program available called COPYFITTING

HELPER which calculates and keeps track of the numbers you need. But it is a principle of education that students should not be introduced to a short-cut before they know the principles that guide it. This is the task for COPYFITTING INSTRUCTOR.

COPYFITTING INSTRUCTOR is designed to lead the student through the calculations that produce a correct answer to a copyfitting problem. At each step, the student is instructed on what is going to happen next and why. At appropriate stages, the student is asked to input numbers such as the characters per pica from a type specimen chart. Although the computer could provide this information, differences in set can vary widely by type-setting equipment, so actual figures are the only route to an accurate solution.

This means that the program is not completely self-contained. The student will still require instruction on how to count a manuscript and how to look up specs in a type book. (Sigh of relief--we teachers still have a job.) But those steps don't seem to be the major stumbling blocks to most students; it's the math that kills. Just in case the concepts such as counting a manuscript remain opaque after regular instruction, the program has a full set of instructions built in.

The only remaining problem in helping students through the use of this software is access to hardware. But very shortly this is not going to be the case, since the price of personal computers is dropping rapidly. And anyway, how will you know you need a computer in your advertising classroom until you have some useful tasks for it to perform?

The program comes with a very short set of suggestions to instructors on what preparation students will need before being

introduced to the program, and suggestions for structuring exercises that can be graded. Unlike some computer-assisted instructional programs, this program does not try to surplant the instructor's role entirely. Thus, you get to decide how to integrate the aid into your class routine. This is an important concept for computer aids to classroom instruction--flexibility to accommodate the instructor's particular goals.

PROGRAM STRUCTURE

In order to provide optimal instructor control in the use of the program, COPYFITTING INSTRUCTOR is designed with three progressive levels of sophistication. First, there is a single step approach to copyfitting problems, where the student can select one step in the copyfitting process to work on. This will accommodate drill on specific steps, with a chance for complete explanations of procedures and formuli for each step. The next level is called "All Calculations--Novice," in which a complete copyfitting problem can be worked out through a set of sequential, pre-planned steps. In this level, each step is accompanied by explanatory material, but less so than the previous level, to serve as a reminder of what terms and concepts are involved in each set. The final level, called "All Calculations--Expert," contains the full set of steps with only one introductory screen which can be by-passed after it has served its purpose of orienting the user to the operation of the program. This last level is the COPYFITTING EXPERT program. The program has also been divided into four autonomous units, each which can function by itself or can be inbedded into

some other CAI configuration. Even the title screen can be bypassed if it becomes tedious, as often happens. This modular approach will also assist ambitious programmers who might want to gut the program or rewrite portions to customize or improve it. To that end, the source code (original BASIC file) for each section is provided. Though the program is copyrighted, the author only requests mention in the credits in any altered versions.

PROGRAM OUTPUT

The program is prepared to produce two kinds of output, besides summarizing answers to the screen. First, it can produce a file with the students name on whichever disk drive the student specifies. This provides the student with a record of all data input and resulting calculations for future reference. It also means that if the computer is not physically connected to a printer, a printable file has been created for processing at later convenience.

If a printer is connected and turned on, the program automatically prints summaries of calculations as the student completes each cycle of steps. Either of these output types eliminates the need for pencil records of progress on a problem. The disk and hard copy files are dated and time stamped at opening and closing of a session, should this information be useful for record purposes.

The following is an example of the output from the program on an Epson or IBM compatible printer: (If you are hooked up to non-Epson equipment, the disk file is ASCII format and

should be readily accessible.)

FIGURE 1
OUTPUT FROM STEP-BY-STEP MODULE (COPYSTEP)

```
COPYFITTING INSTRUCTOR
* Marks number computed for ?      Time: 12:12:55      Date: 06-09-1986
==========================================================================

--------------------CHARACTERS PER MANUSCRIPT-------------------------

AVG LINE x CHARS/INCH x LINES/PAGE x # PAGES + CORRECT = CHARS/MANSCRPT
 6.5  x  10  x  27  x  1.75  + -33  =  3038

--------------------CHARACTERS PER TYPE LINE--------------------------

WIDTH TYPE LINE x CHARS PER PICA = CHARS PER TYPE LINE
 23  x  2.45  =  56.35

--------------------TOTAL TYPE LINES IN TYPE BLOCK--------------------

CHARS PER MANUSCRIPT /  CHARS PER TYPE LINE = TOTAL TYPE LINES
 3038  /  56.35 = 53

--------------------TOTAL DEPTH OF TYPE BLOCK-------------------------

TYPESIZE + LINESPACING * # OF TYPE LINES = TOTAL DEPTH
( 10 + .5 ) x 53 = 46 picas, 4.5 points

==========================================================================
COPYFITTING INSTRUCTOR exitted at 12:14:41                  BY WESSON
```

FIGURE 2
OUTPUT FROM ALL CALCULATIONS NOVICE AND EXPERT MODULES
(COPYNOV AND COPYEXP)

```
COPYFITTING INSTRUCTOR
* Marks number computed for ?      Time: 12:29:27      Date: 06-09-1986
--------------------------------------------------------------------------
CHARS/      TYPE      LINE      SET       CHARS/     SUBHEAD    TOTAL
MANUSC.     SIZE      SPACE     WIDTH     PICA       DEPTH      DEPTH
(chars)     (pts)     (pts)     (pica)    (unit)     (pts)      (pica)
--------------------------------------------------------------------------
4000        10        1         23        2.45       0        * 65
* 3864      10        .5        23        2.45       0          60
4000        10        .5      * 23.80952  2.45       0          60
4000        10        .5        24        2.45       0        * 59
--------------------------------------------------------------------------
COPYFITTING INSTRUCTOR exitted at 12:33:37                  BY WESSON
```

I hope those of you with ready access to computer

I hope those of you with ready access to computer facilities will give this package a try. The program was written in BASIC using as many universal commands as possible to facilitate transcription to other BASICs. The source code is included, so the fearless can customize it, but the operating version is compiled for fast, fool-proof operation. It is placed in the public domain, which means that it can be copied and distributed freely to your students with no rights reserved. Except the author reserves the right to be exemped from blame if just a few students never catch on to the task of copyfitting.

[COPYFITTING INSTRUCTOR]

[OPENING MENU]

[1] SEPARATE STEP CALCULATIONS
Characters Per Manuscript
Characters Per Type Line
Total Type Line in Type Block
Total Depth of Type Block

[2] ALL CALCULATIONS--NOVICE

[3] ALL CALCULATIONS--EXPERT

[8] EXIT THIS PROGRAM

SELECT A NUMBER, PLEASE.

[COPYFITTING INSTRUCTOR]

[OPENING INSTRUCTIONS]

WELCOME TO COPYFITTING INSTRUCTOR

HI. WHAT'S YOUR LAST NAME, PLEASE? WESSON

WHICH DRIVE HAS A DISK TO WRITE TO? (A B C or 0=NONE)

IS THERE A PRINTER CONNECTED AND TURNED ON? (Y or N)

[COPYFITTING INSTRUCTOR]

[OPENING MENU]

[1] CHARACTERS PER MANUSCRIPT

[2] CHARACTERS PER TYPE LINE

[3] TOTAL TYPE LINES IN TYPE BLOCK

[4] TOTAL DEPTH OF TYPE BLOCK

[6] GO TO MAIN MENU

[8] EXIT THIS PROGRAM

SELECT A NUMBER, PLEASE.

[COPYFITTING INSTRUCTOR]

[CHARACTERS PER MANUSCRIPT]

A MANUSCRIPT is copy generally prepared on a typewriter BEFORE it is set in type to be printed.

A CHARACTER in a manuscript is anything that takes up space on a line of copy, including punctuation and space between words.

The number of CHARACTERS PER MANUSCRIPT may be calculated at various levels of accuracy. The shorter the manuscript, the more accurate you should be, and the easier it is to be accurate.

Because typewriters use the same space for ALL CHARACTERS, it is easy to count typed copy by just measuring lines with a ruler. Typewriters using PICA type use 10 CHARACTERS PER INCH on a line. Typewriters using ELITE type use 12 CHARACTERS PER INCH. You can tell which kind of typewriter you are dealing with by simple counting the number of characters in ANY INCH in the copy.

PRESS ANY KEY TO CONTINUE

[COPYFITTING INSTRUCTOR]

[CHARACTERS PER MANUSCRIPT]

Here are the steps in calculating Characters Per Manuscript:

1) Select an average length line of copy
   and measure it with a ruler as a decimal.
2) Count the characters in ANY inch of copy.
3) Count the number of lines per page.
4) Count the number of pages.
5) Multiply numbers from 1, 2, 3, and 4 together.

AVG LINE x CHARS PER LINE x LINES PER PAGE x # OF PAGES = CHARS PER MANS

PRESS ANY KEY TO CONTINUE

[COPYFITTING INSTRUCTOR]

[CHARACTERS PER MANUSCRIPT]

AVG LINE LENGTH (inches): 6.5

CHARACTERS PER INCH : 10

LINES PER PAGE : 27

NUMBER OF PAGES : 2

CORRECTION FACTOR : -22

CHARACTERS PER MANUSCRIPT = 3488

WOULD YOU LIKE TO RUN ANOTHER ONE? (Y or N)

[COPYFITTING INSTRUCTOR]

[NOVICE MODE]

The first number we will need to know is the how long the typewritten copy is. This is called the CHARACTERS PER MANUSCRIPT. Characters are any letter, number, punctuation or space that takes up room on a line of copy. The computer cannot count these for you (unless the copy is written on a computer, in which case it can do it very easily.) So you will have to count the characters yourself. Your instructor has already taught you how to do this.
If you have the CHARACTERS PER MANUSCRIPT calculated, enter the number below. If you do not have a manuscript yet and are trying to figure out how many characters must be written, enter a ? (question mark).

(example: 4000 Do not use a comma in the number.)

Enter CHARS/MANUSCRIPT here:

Enter ? for number to be computed. [F1] then [ENTER] to RESTART or EXIT

[COPYFITTING INSTRUCTOR]

[NOVICE MODE]

Now we need to consider the space between the lines of type, called LINESPACE or LEADING. If no extra linespacing is added, that is, LINESPACE = 0 pts., the lines will be very close on top of each other. Here are some of the commonly used linespace measures:

0 point	called SET SOLID, hard to read in longer lines
.5 point	called HAIRLINE, for 8 or 9 pt. in short lines
1 point	very common for 8 to 11 pt. or shorter lines
2 point	very common for 10 to 14 pt. or longer lines
3 point	used for very long lines or large type

Select one of these measures from the suggestions above. You can easily try another size if you need to by doing the problem again with a ? for this number when the rest of your decisions look right.

Enter LINESPACE (in points) here:

Enter ? for number to be computed. [F1] then [ENTER] to RESTART or EXIT

[COPYFITTING INSTRUCTOR]

[NOVICE MODE]

Thanks for entering all that data. COPYFITTING INSTRUCTOR is ready to make your calculations for you. After it is finished, say, in a nanosecond, it will send a summary to your printer, if it is connected, and to your screen so you can see what happened. If the results are not useful, run the program again using new numbers until the solution works.

Here are the formuli the program will use to compute your solution:

```
CHARACTERS PER PICA  x  SET WIDTH in picas  =  CHARS PER TYPE LINE
CHARS PER MANUSCRIPT ÷ CHARS PER TYPE LINE  =  # OF TYPE LINES
(TYPESIZE + LINESPACE)  x  # OF TYPE LINES  =  DEPTH OF TYPE BLOCK
DEPTH OF TYPE BLOCK     +     SUBHEAD DEPTH  =  TOTAL DEPTH
```

Or working backwards:

```
CHARS PER PICA  x  SET WIDTH  x  # OF TYPE LINES  =  CHARS PER MANUSCRIPT
```

PRESS ANY KEY TO CONTINUE

[COPYFITTING INSTRUCTOR]

[NOVICE MODE]

<*> SUMMARY <*>

CHARS/MANUSC.:	4000 chars.
TYPESIZE:	10 pts.
LINESPACE:	1 pts.
SET WIDTH:	23 picas
CHARS/PICA:	2.44
SUBHEAD TOTAL:	0 pts.
TOTAL DEPTH:	65 picas

WOULD YOU LIKE TO RUN ANOTHER? (Y or N)

[COPYFITTING EXPERT]

[EXPERT MODE]

<*> SUMMARY <*>

CHARS/MANUSC.:	4000 chars.
TYPESIZE:	10 pts.
LINESPACE:	.5 pts.
SET WIDTH:	23 picas
CHARS/PICA:	2.44
SUBHEAD TOTAL:	66 pts.
TOTAL DEPTH:	67 picas

WOULD YOU LIKE TO DO ANOTHER? (Y or N)

BYE. LET'S DO IT AGAIN SOMETIME.